Quant first project report

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1 The quant workflow

1. **Universe selection.** We define some universe of stocks that have some self similary. Also we should eliminate all stocks prohibited or illegal to trade.
2. **Single α factor model**. Define and evaluate individual epressions which rank the cross section of equities.
3. **Alpha combination** . Combine many single alpha factor into a signal α factor. The combined alpha factor will have better prediction power than the best single alpha factor. This is because of the noise from the alpha factors cancel each other out.
4. **Risk model** Define and calculate a set of risk factors you want to use to constrain you portfolio.
5. **portofolio construction** Implement a process which takes yourfinal combined alpha and your risk model and produces a target portfolio that minimises risk under your model.
6. **Eecution Implement** a trading process to transition the current portfolio to the target portfolio.